EXHIBIT 137

REDACTED

Message

From: [redacted]]
Sent: 10/18/2013 1:36:14 AM
To: [redacted]]
CC: Nirmal Jayaram [redacted]]; [redacted]
[redacted]]
Subject: Re: Gtrade incentive issues [redacted])

+1, for what it's worth, it's killing us to be on the other side of this than you guys... we have very high opinions of all of you and your work.

On Oct 17, 2013 6:10 PM, [redacted]
[redacted]
This has been a useful discussion and I want to thank you for all the feedback. While we don't necessarily agree :-) at least gTrade team has better understanding of your concerns.
Let's chat about next steps in person.
[redacted]

On Thu, Oct 17, 2013 at 11:27 AM, [redacted]

On Thu, Oct 17, 2013 at 10:41 AM, [redacted] wrote:
I don't quite follow, perhaps you can explain. Suppose

CPC bid = target CPA x pCVR.

I'd think the advertiser is happy to get as much volume as possible at this CPC bid. If they get an auction discount that's bonus.

So far, we've been discussing max CPC bidders. Target CPA is different because they're bidding on the average cost, whereas everyone else is bidding on the margin, so it's not fair to generalize.

However, I actually think target CPA makes our argument even stronger. All of the incremental clicks that these advertisers get from Bernanke will be first priced, which means the auction discount is smaller, so the models should learn to lower the bid overall to hit the same target. This is true regardless of the assumptions we make about how advertisers set their bids.

Re: [redacted] strawman - his example gives an advertiser the same volume at higher total price. Bernanke gives higher volume at higher total price.

On Wed, Oct 16, 2013 at 10:30 PM [redacted]
LOL... alright. ;)
I forgot that you and [redacted] think bids are disconnected from value... this was a terrible way to frame the argument for this group.
I'll try to pick up [redacted] thread, that seems like it's going to be more productive because it's scenario driven.

[redacted]

On Oct 16, 2013 9:27 PM, "[redacted]> wrote:

One other point - Bernanke could equally well be designed that whenever the advertiser can't win at their first price, and we subsidize, we charge

first price - epsilon

And decrease our "pool" owed the publisher by subsidy + epsilon.

The effects are:
1) Advertiser gets a benefit of epsilon on Bernanke subsized queries.
2) We exhaust our pool of money owed the publisher faster, = fewer matched queries.

Set epsilon to whatever you want until you think advertisers are getting value.

On Wed, Oct 16, 2013 at 9:21 PM, [redacted]> wrote:

In another long thread on CO, here is the final conclusion from [redacted]

On Wed, Oct 16, 2013 at 9:16 PM, [redacted]wrote:

More concretely - if a dynamic RMKT advertiser is willing to pay $1 max CPC, and I find them 1000 more clicks at this CPC, I can absolutely guarantee you every advertiser would want it.

On Wed, Oct 16, 2013 at 9:14 PM, [redacted]wrote:

Sorry to be blunt, but if you think that advertisers derive no benefit from winning more queries at their max CPC, or their target CPA, then you need to spend more time with our sales/PM/marketing team.

On Wed, Oct 16, 2013 at 9:10 PM, [redacted]> wrote:

I am not convinced there is any pie growing. In fact, I believe that after advertisers react, Bernanke is more likely to shrink rather than grow, the pie.

Let me try a different approach...

If the advertiser enters a bid into AdWords, then that should be the most the advertiser is willing to pay right now (under many assumptions, granted, but I think you need them all for Bernanke to make sense as well).

Let's say it's $1.

Bernanke will only deliver incremental value at $1, never cheaper.

Therefore, the advertiser is, at this point, neutral to receiving more of these "most expensive" items. Increasing or decreasing the number of such items is irrelevant to them.

Moreover, for all your reasons stated, they can't 'fix' this by decreasing bids.

Thus, GDN advertisers are neutral and AdX publishers are happy for the extra revenue.

That's the best possible case.

If there is any advertiser that can isolate some of this traffic, they will exploit it by lowering their bids... because only after they can lie to you about their value by shaving it down, will Bernanke be a win for them.

[redacted]

On Oct 16, 2013 7:51 PM, [redacted] wrote:

To clarify what [redacted] said since he was pressed for time. Bernanke is totally different than randomly charging the advertiser their first price on x% of queries that they were already winning. And definitely different than "let's do something sneaky to make more money and throttle it so nobody notices" :-)

Let's recap:

1) Bernanke does not change AdX auction or CAT2 auction rankings. [redacted] knows this because he did the code reviews :-)
2) Bernanke does not change how advertisers are priced - it is the maximum of the CAT2 second price and AdX clearing price, capped at first price.
3) Bernanke does not change anything about queries the advertiser was already winning. They will continue to win all the same queries at exactly the same price. (This is the main difference from straw man).
4) What does change, is that there are some previously **unmatched queries** that GDN can not win even at first price because the AdX reserve price is too high (or perhaps from competition from other DSPs). On a random set of such queries, we pay extra to the publisher and let the advertiser win. The advertiser's bid is less than the AdX clearing price, so we just charge the first price as outlined in #2.
5) Where does money in #4 come from? It comes from reducing second bids elsewhere. We could have kept the money, but decided to pay it back via #4, since this increases advertiser impression/click/conversion volume, increases publisher revenue, and keeps GDN margin constant.
6) We only perform Bernanke on budget unconstrained advertisers, thus total GDN revenue goes up.
7) Even though I don't think it's necessary, we enforce that any single adgroup can only have 10% of its queries subsidized via #4. This was the existing limit from DRS launch. Bernanke v2 would spend the money on the queries we think are most important/profitable/good ROI for advertiser, etc. For instance, if the new queries in #4 have great ROI, why wouldn't we buy more of them for the advertiser?

The main argument that kicked off this thread is it's "wrong" to subsidize a query because then the advertiser, if they could a-priori identify such queries (which they can't) could reduce bid on just those queries and still win them at lower price.

But this can't happen.

First, advertiser only has knob to reduce bid across the whole network, not query by query.

Second, even *if* the advertiser could reduce bid on exactly the queries where we must subsidize bid to win, they must keep the bid above the CAT2 second price to continue winning. Also, we'd be paying higher subsidy on each query (to meet the AdX clearing price). Thus we can't win as many queries before paying back the pool of money to the publisher. By reducing bid, the advertiser wins *less* queries, not the same number. The incentive goal of "you should never win the same number of queries for lower price" is maintained.

On Wed, Oct 16, 2013 at 7:16 PM, [redacted] wrote:

Short answer to [redacted] and [redacted] as i am jumping on the plane: growing the pie that is the difference, what you said is a zero sum game but Bernanke is matching new queries. If AdX match rate grows to 100% without doing Bernanke, Bernanke stops automatically.

On Oct 16, 2013 5:59 PM, [redacted] wrote:

I would like to add another benefit to [redacted] straw man... all of the incremental conversions will be profitable, since we're first pricing them on their value, meaning that (revenue >= 0) + (cpd >= 0) >= 0.

On Oct 16, 2013 5:39 PM, "[redacted]wrote:

On Wed, Oct 16, 2013 at 2:52 PM, [redacted] wrote:
+ Nirmal who got dropped.
+ [redacted] who is reading the doc, but unfortunately this discussion is not in the doc...

On Wed, Oct 16, 2013 at 2:50 PM, [redacted] wrote:
1) How would they know which 10% of queries to bid $1+epsilon on?

Ok, I think I was misremembering how the 10% throttling works and forgetting that we actually flip a coin per query, rather than cap the total number to 10%. But I think my other example still stands.

2) There are many things (including Bernanke) that can shift an advertiser's price volume curve. An advertiser will move to a new equilibrium point. I don't think you can build a system that always ensures they will spend more. For example, tomorrow AdX pubs may launch cross priority ranking and all the reserve prices go up. An advertiser could discover that by lowering bid, they drop a handful of very expensive queries on AdX and maintain most of their AdSense queries. Good for them!

I disagree. This is one of the big benefits of VCG: even if the landscape of other bids in the auction changes, the incentive is still to bid truthfully (for budget unconstrained advertisers). The handful of very expensive queries still cost less than the advertiser bid, so the advertiser would *not* want to drop them (their profit is still positive, just smaller than some other queries). When the landscape changes, VCG still picks the point on the curve where marginal cost equals bid, so bidding truthfully is still optimal.

Let me suggest this straw man proposal (and for simplicity, forget about adx for a second and just think about the cat2 auction): let's change our auction to first pricing, with all the same 10% throttling logic as gTrade uses. Clearly the short term effect is just that we make more money. And if advertisers try to lower their bids, they start losing some of the queries they were previously getting. Do you think this would be a good idea? If not, what is it about your argument that justifies Bernanke but not a complete first price auction?

3) You are looking at a case where there's only 1 advertiser. If there are many advertisers, and this particular one starts lowering bid, we can (and will) spend money elsewhere rather than blindly increasing the subsidy for this advertiser.

I don't follow - can you give an example? I'm not saying advertisers will lower their bids all the way to zero, I'm just saying they'll have the incentive to lower them to some point that optimizes how much subsidy they're able to extract vs how many queries they give up. Some advertisers will have more incentive to lower than others.